

Q2 7. (Amended) The method of claim 6, wherein one of the appliances rotates the teeth [is rotated] approximately five and ten degrees [(per stage)].

Q3 10. (Amended) The method of claim 9, wherein one of the appliances moves each tooth [is moved] approximately 0.2mm to approximately 0.4mm [in each stage].

11 12. (Amended) The method of claim 11 wherein one dimension of the array identifies each segment [stage in the teeth movement]. 10

Q4 13. (Amended) The method of claim 1, wherein generating the treatment path[s] segments includes determining the minimum amount of transformation required to move each tooth from the initial position to the final position and creating each treatment path segment to require only the minimum amount of movement.

13 14. (Amended) The method of claim 1, wherein generating the treatment path segments includes generating intermediate positions for at least one tooth between which the tooth undergoes translational movements of equal sizes.

14 15. (Amended) The method of claim 1, wherein generating the treatment path segments includes generating intermediate positions for at least one tooth between which the tooth undergoes translational movements of unequal sizes.

15 16. (Amended) The method of claim 1, further comprising applying a set of rules to detect any collisions that will occur as the patient's teeth move along the treatment path[s] segments.

Q5 18 18. (Amended) The method of claim 1, further comprising receiving information indicating whether the patient's teeth are following the treatment path[s] segments and, if not, using the information to revise the treatment path[s] segments.

Q5 19 20. (Amended) The method of claim 1, wherein generating treatment path[s] segments comprises generating more than one candidate treatment path segment for each tooth and providing a graphical display of each candidate treatment path segment to a human user for selection.

Q6 20 21. (Amended) The method of claim 1, further comprising applying a set of rules to detect any collisions that will occur as the patient's teeth move along the treatment path[s] segments.

Q6 23 24. (Amended) The method of claim 1, further comprising applying a set of rules to detect any improper bite occlusions that will occur as the patient's teeth move along the treatment path[s] segments.

Q7 25 26. (Amended) The method of claim 1, wherein generating the treatment path[s] segments includes receiving data indicating restraints on movement of the patient's teeth and applying the data to generate the treatment path[s] segments.

Q8 27 28. (Amended) The method of claim 1, further comprising animating the graphical representation of the teeth to provide a visual display of the movement of the teeth along the treatment path[s] segments.

Q9 34 35. (Amended) The method of claim 1, wherein the information relates to the motion that the tooth will experience while moving along the treatment path[s] segments.

Q10 40 41. (Amended) A computer-implemented system for use in creating a plan to reposition a patient's teeth from a set of initial tooth positions to a set of final tooth positions, comprising:
receiving an initial digital data set representing the teeth at the initial positions, wherein receiving the initial digital data set comprises receiving data obtained by scanning the patient's teeth or a physical model thereof;